

Remarks

Claims 1-9, 11, 12, and 22-30 were pending. By this paper, Applicants amended claims 22, 25 and 27. No new matter is added by the present Amendment. Reconsideration of the application in view of the present Amendments and the following remarks is respectfully requested.

1. Claim Rejections Under 35 U.S.C. §103(a)

a) Claims 1-7, 11-12, 22-24, 27-28 and 30 are rejected 35 U.S.C. §103(a) as being unpatentable over Riesop WO 99/24638 (i.e. corresponding English equivalent is Riesop US 6,537,387 B1(Riesop) in view of Murphy US 5,391,234 (Murphy). Applicants respectfully traverse this rejection.

The present invention is directed to a temporary anti-corrosive treatment of a metal surface that consists predominately of aluminum and/or zinc. The temporary primary passivating coating provides corrosive protection to the underlying metal surface until the primary passivating coating is removed from the metal surface prior to the subsequent step of conversion coating the metal surface. Thus, the conversion coating is in direct contact with the aluminum and/or zinc metal surface without the presence of the primary passivating coating layer.

Specifically, Applicants' invention as recited in independent claim 1, recites a method for the temporary anti-corrosive treatment of a metal surface that consist predominately of aluminum and/or zinc. The method comprises (a) placing the surface of the metal in contact with an anti-corrosive composition comprising 2.0-400 g/L phosphate ions, 0.5-400 g/L fluorometallate ions, and a pH of between 1.0-4.0, for a time period of between 0.1-200 seconds, (b) drying the anti-corrosive composition to form a primary passivating coating on the metal surface, (c) removing the primary passivating coating from the metal surface, and (d) conversion coating the metal surface.

Applicants submit that the combination of Riesop in view of Murphy is not a proper combination. To begin with, Riesop, in view of Murphy, does not disclose, teach or suggest the present invention. As the Examiner correctly points out on page 3 of the Office Action, Riesop does not teach the claim step (c) of removing the primary passivating coating from the metal surface. This is because Riesop does not remove any coatings. The coating of Riesop is never removed given that it is later coated with a permanent anti-corrosive layer. (Column 1, lines 11-20). Thus, Riesop's coating serves as a preliminary treatment of the metal surface prior to a more corrosive resistant coating (column 1, lines 11-20). Consequently, Riesop does not, and would not, teach removing his coating. As such, Riesop would never look to Murphy for a teaching on how to remove its coating. The only teaching of removing the coating comes from Applicant's own disclosure. It is impermissible to use Applicants disclosure in such a way.

As discussed above, the Patent Office looks to Murphy for the missing removing step (c). However, Murphy, even if it was proper for the Patent Office to combine with Riesop, does not teach removal of the claimed coating. The claimed passivating coating is formed from an inorganic composition comprising phosphate and fluorometallate ions. Murphy is directed toward the stripping or removal of defective organic decorative or protective films from metal surfaces such as aluminum, zinc and their alloys (column 8, lines 6-13). More specifically, Murphy discloses applying a stripping solution to remove or loosen organic decorative or protective films such as; acrylic, epoxy, vinyl, and/or alkyd resin coating components, from a metal surface to which they have been applied (column 4, lines 24-29). The claimed coating is not an organic coating. Instead, it is an inorganic coating. Moreover, the claimed inorganic coating is not misapplied, but is only intended to be temporary, for the shipping and storage of the metal article until a subsequent more corrosion resistant coating is applied. Thus, Murphy does not teach or suggest a method to remove a temporary inorganic primary passivating coating from a metal surface. Again, the only teaching of such comes from the Applicants own disclosure.

Accordingly, Applicants respectfully request the Examiner to withdraw the rejections of claims 1, 22, and 27 as they each claim removing a primary passivating coating formed from a composition comprising phosphate and fluorometallate ions.

Therefore, for at least these reasons, claims 1, 22, and 27 are allowable as set forth above. Moreover, claims 22 and 27 are further allowable for additional limitations as will be discussed further below.

Claims 2-7, 11, and 12 all depend directly or indirectly from claim 1 and are therefore allowable at least for the same reasons as claim 1. Moreover, these claims add further features which render them separately allowable.

Claim 22 recites a method for the temporary anti-corrosive treatment of metal surface that consist predominately of aluminum and/or zinc. The method comprises:

- a) placing the surface of the metal in contact with an anti-corrosive composition comprising 2.0-400 g/L phosphate ions, 0.5-400 g/L fluorometallate ions selected from the group consisting of TiF_6^{-2} , ZrF_6^{-2} , HfF_6^{-2} , SiF_6^{-2} , AlF_6^{-3} , GeF_6^{-2} , SnF_6^{-2} , and BF_4^- , and having a pH of between 1.0-4.0, for a time period of between 0.1-200 seconds;
- b) drying the anti-corrosive treatment composition on the metal surface to form a primary passivating coating on the metal surface;
- c) leaving the primary passivating coating on the metal surface for a predetermined time period during shipping and storage of the metal surface;
- d) exposing the primary passivating coating to an alkaline cleaner to remove the primary passivating coating form the metal surface; and
- e) conversion coating the curved metal surface with a second corrosion resistant coating, the second corrosion resistant coating being a more permanent corrosion resistant coating then the primary passivating coating.

As discussed above, the prior art does not disclose, teach or suggest leaving the primary passivating coating on the metal surface for a predetermined period of time during shipping and storage of the metal surface. In Riseop, the metal coating is never removed. In

Murphy, the coating is only removed when it was misapplied. It is not intended to stay on the surface only during shipping and storage of the metal surface. As such, the prior art also does not teach, disclose or suggest conversion coating the cleaned metal surface with a second corrosion resistant coating which is more resistant to corrosion than the primary passivating coating. Accordingly, Applicants respectfully allowance of claim 22.

Claims 23-26 all depend directly or indirectly from claim 22 and are therefore allowable at least for the same reasons as claim 22. Moreover, these claims add further features which render them separately allowable.

For instance, claim 23 recites that the anti-corrosive composition consists essentially of phosphate ions, fluorometallate ions and water. Riesop's composition does not consist essentially of phosphate and fluorometallate ions and water as it includes manganese (II) ions (column 2, lines 5-8).

In addition, claim 25 recites that the anti-corrosive composition in an amount of 0.1-150 g/L composition consists essentially of phosphate ions, fluorometallate ions, amino-phenolic polymer and water and that the amino-phenolic polymer is present in an amount of 0.1-150g/L.

Furthermore, claim 26 recites the method of claim 25 wherein the amino-phenolic polymer is provided as a solution with an acid selected from the group consisting of fluorotitanic acid, phosphoric acid, and fluorozirconic acid and the ratio of the amino-phenolic polymer and the acid is 1.0:1.0 to 50:1.0. Riesop in view of Murphy does not explicitly teach the claimed amino-phenolic polymer in the protective coating solution.

Claim 27 recites a method for the temporary anti-corrosive treatment of metal surface that consist predominately of aluminum and/or zinc. The method comprises:

- a) placing the surface of the metal in contact with an anti-corrosive composition comprising 2.0-400 g/L phosphate ions, 6.0-400 g/L fluorometallate ions, and having a pH of between 1.0-4.0 for a predetermined period of time;
- b) drying the anti-corrosive treatment composition on the metal surface to form a primary passivating coating on the metal surface;
- c) removing the primary passivating coating from the metal surface; and
- d) conversion coating the metal surface, after the primary passivating coating has been removed from the metal surface; and
- e) coating the metal surface with an organic coating.

As discussed above, the limitations of claim 27 are not disclosed, taught or suggested in the prior art. Thus, claim 27 is allowable.

Claims 28-30 all depend directly or indirectly from claim 27 and are therefore allowable at least for the same reasons as claim 27. Moreover, these claims add further features which render them separately allowable.

For instance, claim 29 recites that the anti-corrosive composition further comprises 0.1-150 g/L amino-phenolic polymer. Riesop in view of Murphy does not teach the claimed amino-phenolic polymer in the protective coating solution.

Claims 8 and 9 are rejected 35 U.S.C. §103(a) as being upatentable over Riesop in view of Murphy and further in view of Torok et al. US4,287,008 (Torok). Applicants respectfully traverse this rejection.

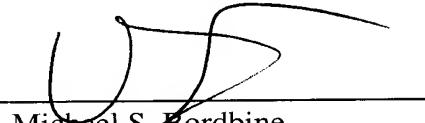
Applicants submit that it is improper to combine Riesop with Murphy as noted above. Torok does not remedy the deficiencies of Murphy in that Murphy does not describe removing the primary passivating coating from the metal surface. Claims 8 and 9 depend from claim 1 and, therefore, are patentable for at least the same reasons as claim 1. Moreover, these claims add further features which render them separately allowable.

Applicants have made a genuine effort to respond to each of the Examiner's rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is invited to contact the undersigned at his earliest convenience.

Please charge our Deposit Account No. 02-3978 in the amount of \$930.00 to cover the 1 month Petition fee of \$120.00 and the RCE filing fee of \$810.00. Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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